1. A gas detector comprising:

at least one source of infrared radiation;

at least two analytical detectors, each analytical detector adapted to provide an output signal indicative of a first gas of interest, said analytical detectors being positioned to receive radiation from said source of radiation;

at least one reference detector adapted to provide an output signal independent of the first gas of interest; and

a sample chamber for receiving a gaseous sample,

the optical path from said source of infrared radiation to said analytical detectors passing through said sample chamber.

2. The gas detector of claim 1, further comprising a means for summing the signals detected by said two analytical detectors.

3. The gas detector of claim 2, wherein said analytical detectors further comprise said means for summing.

4. The gas detector of claim 2, wherein said summing means comprises summing amplifier.

5. The gas detector of claim 2, wherein said summing means comprises a summing node.

6. The gas detector of claim 2, wherein said summing means comprises an analog summing node.

7. The gas detector of claim 2, wherein said summing means comprises a digital summing node.

8. The gas detector of claim 2, wherein said summing means comprises a microprocessor.

9. The gas detector of claim 1, further comprising an interference filter positioned to filter radiation received by at least one of said analytical detectors.

10. The gas detector of claim 1, wherein the source of infrared radiation comprises at least one of heated filament, a black body source, and light emitting diode.

11. The gas detector of claim 1, wherein the source of infrared radiation comprises an incandescent lamp.

12. The gas detector of claim 1, wherein said source of infrared radiation consists of one source of infrared radiation.

13. The gas detector of claim 1 comprising at least three analytical detectors.

14. The gas detector of claim 1 comprising at least four analytical detectors.

15. The gas detector of claim 1 further comprising at least two additional analytical detectors, said at least two additional analytical detectors adapted to provide an output signal indicative of a second gas of interest, the second gas of interest being different from the first gas of interest.

16. The gas detector of claim 1, wherein a filter interposed between the at least one source of infrared radiation and each analytical detector, the filter being adapted to transmit infrared radiation of a first band of wavelengths, said first band of wavelengths corresponding to radiation of a wavelength absorbed by the first gas of interest.

17. The gas detector of claim 15, wherein a filter is interposed between the at least one source of infrared radiation and each additional analytical detector, the filter being adapted to transmit radiation of a second band of wavelengths, said second band of

wavelengths corresponding to radiation of a wavelength absorbed by the second gas of interest.

18. The gas detector of claim 15, wherein a filter is interposed between the at least one source of infrared radiation and each reference detector, each filter being adapted to transmit radiation of a third band of wavelengths, the third band of wavelengths corresponding to radiation of a wavelength that is not absorbed by the first gas of interest and the second gas of interest.

19. The gas detector of claim 1, further comprising a microprocessor for receiving and analyzing signals generated by the analytical detectors.

20. A gas detector for detecting a predetermined gas, the gas detector comprising:

a source of infrared radiation; and

a plurality of infrared radiation detectors, at least two of said infrared radiation detectors being adapted to detect radiation of a first wavelength and being adapted to provide an output signal corresponding to the presence of the gas of interest.

21. The gas detector of claim 20, further comprising a means for summing signals generated by said analytical detectors.

22. A method of detecting gas using a gas detector comprising

a source of infrared radiation,

at least two analytical detectors, each of said at least two analytical detectors being adapted to generate a signal indicative of a first gas of interest, a sample chamber, and

an optical path passing through said sample chamber,

the method comprising:

transmitting infrared radiation from said source of infrared radiation through a gaseous sample present in the sample chamber of said gas detector;

detecting infrared radiation of a predetermined wavelength at said analytical detectors;

sending a signal from said analytical detectors to a processor; and

summing the signals from said analytical detectors.

23. The method of claim 22, wherein said summing occurs in said analytical detectors

24. The method of claim 22, wherein said summing occurs in a processor.

25. The method of claim 22, wherein said summing occurs prior to said analytical detectors sending a signal to said processor.

26. The method of claim 22, wherein said summing occurs after said analytical detectors send a signal to said processor.

27. The method of claim 22, wherein radiation from the source of infrared radiation that is incident on the analytical detectors is essentially unreflected from surfaces interposed between the analytical detectors and the source of infrared radiation.

28. A method of analyzing a gaseous sample, the method comprising:

passing the gaseous sample through the sample chamber of a gas detector comprising

at least one source of infrared radiation,

at least two analytical detectors, each analytical detector being adapted to provide an output signal indicative of a first gas of interest, said analytical detectors being positioned to receive radiation from said source of radiation, and

a sample chamber;

radiating the gaseous sample with radiation from said source of infrared radiation;

detecting said radiation at said analytical detectors;

generating signals corresponding to said detected radiation;

summing signals generated by said analytical detectors; and

analyzing the signals generated by the detectors.

29. The method of claim 28, wherein the analyzing comprises determining the presence or absence of a first gas of interest in the gaseous sample.

30. The method of claim 28, wherein the analyzing comprises determining the concentration of a first gas of interest in the gaseous sample.

31. The method of claim 28, wherein the analyzing comprises

determining the concentration of the first gas of interest, and

determining the concentration of a second gas of interest.